

CLAIMS

1. A system for analysing energy usage on a network which includes a number of
5 energy sources and a number of energy consumers, the system including a plurality of
meters on the network which monitor energy usage on the network, the meters
supplying data to data processing apparatus which aggregates the data so as to provide
an indication of current total energy usage, and which stores data so as to permit the
retrieval of historical energy usage for points or periods of time in a year, wherein the
10 data processing apparatus further compares current total energy usage for a particular
point or period of time in a year with a standard total energy usage based on historical
energy usage for that point or period of time in a year, and generates an index which
indicates the difference between standard energy usage and the current total energy
usage.
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2. A system as claimed in claim 1, wherein a period of time is taken for data to be
received from all of the meters, and once the data has been received from all of the
meters and aggregated, subsequent aggregate totals are calculated at intervals
substantially shorter than said period of time using the latest data received from all of
20 the meters.
3. A system as claimed in claim 2, wherein subsequent aggregate totals are
calculated upon receipt of updated data from any meter.
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4. A system as claimed in claim 2, wherein subsequent aggregate totals are
calculated at predetermined intervals using all updated data received from meters which
has been received during the interval since the previous calculation of an aggregate
total.
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5. A system as claimed in claim 2, 3 or 4, wherein upon calculation of a subsequent
aggregate total, there is also calculated a an integrated estimate of total demand over a
rolling period of predetermined length.

6. A system as claimed in 5 wherein a current estimate of current network demand over a rolling period of predetermined length is compared with a comparable historic average.

5 7. A method of analysing energy usage on a network which includes a number of energy sources and a number of energy consumers, the system including a plurality of meters on the network which monitor energy usage on the network, wherein the meters supply data to data processing apparatus which aggregates the data so as to provide an indication of current total energy usage, and which stores data so as to permit the
10 retrieval of historical energy usage for points or periods of time in a year, the data processing apparatus further comparing current total energy usage for a particular point or period of time in the year with a standard total energy usage based on historical energy usage for that point or period of time in the year, and generating an index which indicates the difference between the historical energy usage and the current total energy
15 usage.

8. Data processing apparatus for use in a system for analysing energy usage on a network which includes a number of energy sources and a number of energy consumers, the system including a plurality of meters on the network which monitor energy usage
20 on the network, wherein the data processing apparatus is adapted to receive data from the meters, to aggregate the data so as to provide an indication of current total energy usage, and to store the data so as to permit the retrieval of historical energy usage for points or periods of time in the year, and wherein the data processing apparatus is further adapted to compare current total energy usage for a particular point or point or
25 period of time in the year with a standard total energy usage based on historical energy usage for that particular point or point or period of time in the year, and to generate an index which indicates the difference between the historical energy usage and the current total energy usage.

30 9. A computer software product containing instructions to be loaded on to data processing apparatus so as to configure the data processing apparatus so as to be adapted for use in a system for analysing energy usage on a network which includes a number of energy sources and a number of energy consumers, the system including a plurality of

meters on the network which monitor energy usage on the network, wherein the computer software product is such that data processing apparatus will be configured to be adapted to receive data from the meters, to aggregate the data so as to provide an indication of current total energy usage, and to store the data so as to permit the retrieval
5 of historical energy usage for points or periods of time in the year, and wherein the computer software product is such that the data processing apparatus will be further configured to be adapted to compare current total energy usage for a particular point or period of time in the year with a standard total energy usage based on historical energy usage for that point or period of time of the year, and to generate an index which
10 indicates the difference between the historical energy usage and the current total energy usage.

10. A system for analysing energy usage on a network which includes a number of energy sources and a number of energy consumers, the system including a plurality of
15 meters on the network which monitor energy usage on the network, wherein the meters supply data to data processing apparatus which aggregates the data so as to provide an indication of current total energy usage, wherein a period of time is taken for data to be received from all of the meters, and once the data has been received from all of the meters and aggregated, subsequent aggregate totals are calculated at intervals
20 substantially shorter than said period of time using the latest data received from all of the meters.

11. A system as claimed in claim 10, wherein the subsequent aggregate totals are calculated using immediate substitution rather than periodic aggregation.

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12. A method of reducing the consequences of imbalances in an energy network in which energy retailers contract for the supply of energy from energy producers, the method comprising the steps of using a commonly applicable index by producers and retailers to give an indication of the degree of imbalance on the network, and using the
30 index so that retailers and producers can contract for production, and retailers can hedge capacity from producers, in such a way as to assist in physically balancing the network.